PLANAR

PL1702
LCD Monitor

USER'S GUIDE

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Contents

Preface

This manual is designed to assist users in setting up and using the LCD Monitor. Information in this document has been carefully checked for accuracy; however, no guarantee is given to the correctness of the contents. The information in this document is subject to change without notice. This document contains proprietary information protected by copyright. All rights are reserved. No part of this manual may be reproduced by any mechanical, electronic or other means, in any form, without prior written permission of the manufacturer.   Windows is a registered trademark of Microsoft Inc. Other brand or product names are trademarks of their respective holders.

FCC Statement Warning

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy, and if not installed and used in accordance with the instruction, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reposition or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced monitor technician for help.

Warning

Use only shielded signal cables to connect I/O devices to this equipment. You are cautioned that changes or modifications not expressly approved by the party responsible for compliance could void your authority to operate the equipment.

This device complies with part 15FCC Rules. Operation is subject to the following two conditions(1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation.

This device complies with part 15 FCC Rules. Operation is subject to the following two conditions (1) This device may not cause harmful interference. (2) This device must accept any interference received, including interference that may cause undesired operation.

Canadian DOC Notice



This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conforme à la norme NMB-003 du Canada.

Important Safety Instructions

Please read the following instructions carefully. This manual should be retained for future use.

1. To clean the LCD Monitor screen:
   -- Power off the LCD Monitor and unplug the AC Cord.
   -- Spray a non-solvent cleaning solution onto a rag.
   -- Gently clean the screen with dampened rag.

2. Do not place the LCD Monitor near a window. Exposing the monitor to rain water, moisture or sunlight can severely damage it.

3. Do not apply pressure to the LCD screen. Excess pressure may cause permanent damage to the display.

4. Do not remove the cover or attempt to service this unit by yourself. Servicing of any nature should be performed by an authorized technician.

5. Store the LCD Monitor in a room with a room temperature of -20° ~ 60°C (or -4° ~ 140°F). Storing the LCD Monitor outside this range could result in permanent damage.

6. If any of the following occurs, immediately unplug your monitor and call an authorized technician.
   * Monitor to PC signal cable is frayed or damaged.
   * Liquid spilled into LCD Monitor or the monitor has been exposed to rain.
   * LCD Monitor or the case is damaged.

7. Only use the supplied main lead to connect the monitor. For a nominal current up to 6A and a device weight above 3 kg, a line not lighter than H05VV-F, 3G, 0.75 mm^2 must be used.

Important Recycle Instruction:

Hg Lamp(s) inside this product contain mercury. This product may contain other electronic waste that can be hazardous if not disposed of properly. Recycle or dispose in accordance with local, state, or federal Laws. For more information, contact the Electronic Industries Alliance at WWW.EIAE.ORG. For lamp specific disposal information check WWW.LAMPRECYCLE.ORG.

Contains Mercury, Dispose of Properly

Installation

Unpacking

Before unpacking the LCD Monitor, prepare a suitable workspace for your Monitor and computer. You need a stable and clean surface near a wall power outlet. Make sure that the LCD Monitor has enough space around it for sufficient airflow. Though the LCD Monitor uses very little power, some ventilation is needed to ensure that the Monitor does not become too hot.

After you unpack the LCD Monitor, make sure that the following items were included in the box:

* LCD Monitor
* Monitor-to-PC VGA Cable
* Stereo Jack Audio Cable
* User's Manual
* Power Cord
* Base

.

Connecting the LCD Monitor and Base

When you open the box, take the base and put on the desk first. Then connect the LCD Monitor and base.(See fig.1-1)

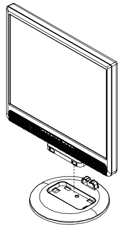


Figure 1-1

Viewing Angle Adjustment

The LCD Monitor is designed to allow users to have a comfortable viewing angle. The viewing angle can be adjusted from -5°to +20°.and the swivel angle can be adjusted to +/-360° (See fig. 1-2)

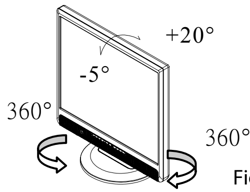


Figure 1-2

Warning

Do not force the LCD Monitor over its maximum viewing angle settings as stated above. Attempting this will result in damaging the Monitor and Monitor stand.

Detaching LCD Monitor from Its Stand

Unscrew screws ❶ the swivel base support column and pull down❷ the hinge to release.

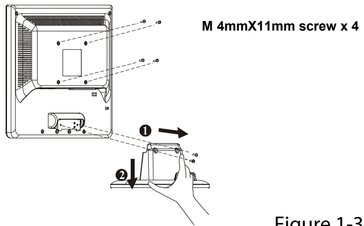


Figure 1-3

Interface for Arm Applications

Before installing to mounting device, please refer to Fig.1-3.

The rear of this LCD display has four integrated 4 mm, 0.7 pitches threaded nuts, as well as four 5 mm access holes in the plastic covering as illustrated in Figure 1-4. These specifications meet the VESA Flat Panel Monitor Physical Mounting Interface Standard (paragraphs 2.1 and 2.1.3, version 1, dated 13 November 1997).

Note :Please using M 4mm x 11mm (L) screw for this application.

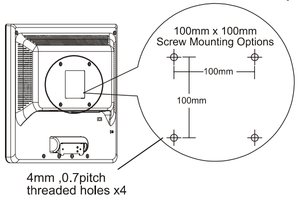


Figure 1-4

Connecting the Display

1. Power off your computer.
2. Connect one end of the signal cable to the LCD Monitor's VGA port. (See Fig 1-5)
3. Connect the other end of the signal cable to the VGA port on your PC.
4. Make sure connections are secure.

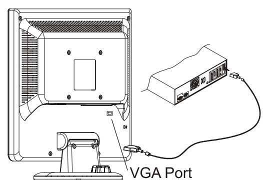


Figure 1-5

Connecting the AC Power

1. Connect the power cord to the LCD Monitor.(See Fig. 1-6)
2. Connect the power cord to an AC power source.

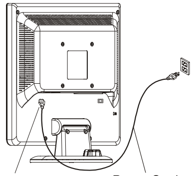


Figure 1-6

Connecting the Audio Cable

1. Connect the audio cable to the “LINE OUT “ jack on your PC's audio card or to the front panel's “AUDIO OUT” jack of your CD ROM drive. (See Fig. 1-7)
2. Connect the other end of the audio cable to the LCD Monitor's " LINE IN " jack.

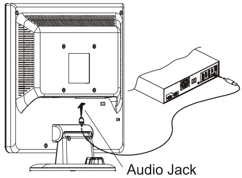


Figure 1-7

Setting Up the LCD Monitor

1. Make sure the AC power cord is connected to the LCD Monitor.
2. Turn on the LCD Monitor's power switch, located on the bezel of the monitor.

Power Management System

This LCD Monitor complies with the VESA DPM Power Management guidelines. If you have VESA's DPM™ compliance display card or software installed in your PC, the monitor can automatically reduce its power consumption when not in use. If input from keyboard, mouse or other input devices is detected by the computer, the monitor will automatically "wake up". When the LCD Monitor is in power saving mode, the monitor screen will be blank and the power LED indicator will light yellow.

Display Controls

User Controls

A brief description and the location of all LCD Monitor functions controls and indicators:

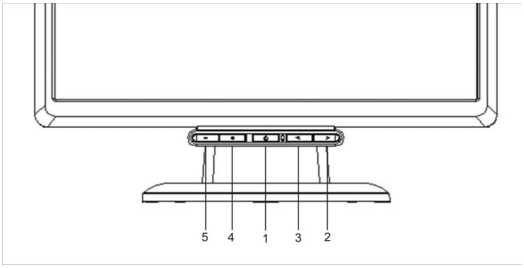


Figure 2-1

1	⏻	Power LED will be Green when the monitor is on, Yellow when in power saving mode, and Dark when the monitor is off. Press this button to turn on and turn off the monitor.
2	>	Function select (clockwise)
3	<	Function select (counter-clockwise)
4	+	Audio Volume increase (For PL1700M only) / Adjust increase.
5	−	Auto adjust (When OSD/Volume control is not activated) / Audio Volume decrease (For PL1700M only) / Adjust decrease

Adjusting the Monitor's Display

The monitor has four function control buttons to select among functions shown on OSD menu, designed for easy user-viewing environments.

OSD Function Menu

To access OSD Main menu, simply press > and < Function Select control buttons, and the menu diagram will pop up on the screen as shown on Fig. 2-2:
Continue pressing the Function Select buttons to scroll through the entire menu items, then press Adjustment Control buttons to adjust content of selected item.

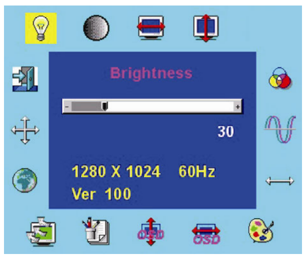


Figure 2-2

Attention

Firmware revision may have been updated into a latest version while the version number shown on all OSD menus in this manual will stay as Ver. 1.00.

Function Description

Icon	Function	Function Description
	Brightness	101 scales of brightness are available to choose from (0 to 100).
	Contrast	101 scales of contrast are available to choose from (0 to 100).
	H. Position	This function let's you adjust the display's horizontal position.
	V. Position	This function let's you adjust the display's vertical position.
	OSD Transparency	This function let's you set the transparency of the OSD menu. The transparency is adjustable from 0 to 10. 11 scales are available.
	Phase	A total of 101 scales (0 to 100) are available to adjust the focus and clarity of the display.
	Clock	This function carries a frequency-tracking feature that offers users better stability and clarity. 101 scales (from -50 to +50) are available on the mode that is currently running. The adjustable range can be variable in different modes. This function records the deviated number of clock period between input timing and supported timing. The clock value may not be "0" after Auto Adjustment when the input timing is different from supported timing.
	Color Temperature	Push the − or + button to select a different color temperature. Please see the diagram below for function and description.
	OSD H. Position	This function moves the OSD menu window horizontally.
	OSD V. Position	This function moves the OSD menu window vertically.
	Graph / Text	Because the H and V-Frequencies of both 640 x 400 70Hz, and 720 x 400 70Hz, are the same, this function let's you manually select either 640 x 400 (graphics mode), or 720 x 400 (text mode).
	Recall	The recall function will return all adjusted parameters to factory preset values.
	Language	Nine OSD language options are available: English, German, French, Spanish, Italian, Japan, Russian, Simplified Chinese and Traditional Chinese. Press the − or + adjustment control button to select other language.
	Auto Adjustment	The Auto Adjustment function let you adjust the display size, clock and phase to obtain the best viewing settings. This process will take 3 ~ 5 seconds to complete. Attention: After Auto Adjustment, the display might display wrong position or size, if it has received a pattern which has no screen border.
	Exit	Saves the values of this setting and exits the OSD menu function.

Icon	Function	Description
9300	CIE coordinated Color Temperature of 9300°K	Sets the CIE coordinate color temperature to 9300°K
7500	CIE coordinated Color Temperature of 7500°K	Sets the CIE coordinate color temperature to 7500°K
6500	CIE coordinated Color Temperature of 6500°K	Sets the CIE coordinate color temperature to 6500°K
User	Three colors (Red, Green, Blue) can be adjusted from the OSD menu	Sets the settings to a user defined CIE Temperature.

OSD Lock Out Function

When monitor is in normal display, you can enable the “OSD Lock Out” function.

Option 1: OSD lock – all 4 buttons are locked except the “POWER” button.

Press and hold the ,  *and*  buttons for same time 3 seconds to lock the buttons.

The monitor will show an “OSD Lock Out” message for 5~10 seconds and the message will disappear automatically.



Repeat this step to unlock.

Option 2: OSD & Power button lock – all 5 buttons including the “POWER” button are locked.

Press and hold the  and  buttons for same time 3 seconds to lock all 5 buttons.

The monitor will show an “Lock Out” message for 5~10 seconds and the message will disappear automatically.



Repeat this step to unlock

Technical Information

Specifications

LCD Panel	
Size	17" (43 cm)
Display Type	Active matrix color TFT LCD
Resolution	1280 x 1024
Display Dot	1280 x (RGB) x 1024
Display Area (mm)	337.92 x 270.336 (H x V)
Display Color	16.7M (RGB 6 bits+FRC)
Lamp Voltage (typical)	660 Vrms
Lamp Current (typical)	7.5 mA rms.

Video	
Input Signal	Analogue RGB 0.7Vp-p
Input Impedance	75 Ohm ± 2%
Polarity	Positive, Negative
Amplitude	0 - 0.7 ± 0.05 Vp
Multi-mode Supported	Horizontal Frequency: 30 ~ 80 kHz Vertical Frequency: 56 ~ 75 Hz

Control	
Power switch	On/Off switch with LED indicator

OSD	
Brightness	Digital
Contrast	Digital
Horizontal Position	Digital
Vertical Position	Digital
Phase	Digital
Clock	Digital
Display Mode Setup	Use EEPROM to save settings in memory
OSD Format	26 characters x 15 rows

Power Management

Mode	Power Consumption*	AC Input	LED Color
DPM ON	48W maximum	240 VAC	GREEN
DPM OFF	2W maximum	240 VAC	Yellow
DC switch off	1W maximum	240 VAC	Dark
Disconnected	2W maximum	240 VAC	Dark

Meeting VESA DPM requirements measured from AC Input end of AC power cord.

Sync Input	Analogue
Signal	Separate TTL compatible horizontal and vertical synchronization
Polarity	Positive and negative

Plug & Play	Supports VESA DDC2B functions	
External Connection		
Power Input (AC input)	AC socket	
Video Cable	15-pin D-sub connector	
Audio Cable	Stereo Jack	
Environment		
Operating Condition:	Temperature	5°C to 40°C/41°F to 104°F
	Relative Humidity	20% to 80%
Storage Condition:	Temperature	-20°C to 60° C/-4°F to140° F
	Relative Humidity	5% to 85%
Power Supply (AC Input)		
Input Voltage	Single phase, 100 ~ 240VAC, 50 / 60 Hz	
Input Current	1.2 A maximum	
Size and Weight		
Dimensions	367 (W) x 383.4 (H) x 199 (D) mm	
Net Weight	3.6 ± 0.3 kg	
Gross Weight	5.6 ± 0.3 kg	

Standard Timing Table

If the selected timing is NOT included in table below, this LCD monitor will use the most suitable available timing.

TIMING	FH(kHZ) FV(HZ)	SYNC POLARITY	TOTAL (DOT/ LINE)	ACTIVE (DOT/ LINE)	SYNC WIDTH (DOT/LINE)	FRONT PORCH (DOT/LINE)	BACK PORCH (DOT/LINE)	PIXEL FOREQ (MHZ)
640x350	31.469	+	800	640	96	16	48	25.175
VGA-350	70.087	–	449	350	2	37	60	
640x400	24.83	–	848	640	64	64	80	21.05
NEC PC9801	56.42	–	440	400	8	7	25	
640x400	31.469	–	800	640	96	16	48	25.175
VGA-GRAPH	70.087	+	449	400	2	12	35	
640x400	31.5	–	800	640	64	16	80	25.197
NEC PC9821	70.15	–	449	400	2	13	34	
640X480	31.469	-	800	640	96	16	48	25.175
VESA-PAL	50.030	-	629	480	2	62	85	
640x480	31.469	–	800	640	96	16	48	25.175
VGA-480	59.94	–	525	480	2	10	33	
640x480	35.00	–	864	640	64	64	96	30.24
APPLE MAC-480	66.67	–	525	480	3	3	39	
640x480	37.861	–	832	640	40	16	120	31.5
VESA-480-72Hz	72.809	–	520	480	3	1	20	
640x480	37.5	–	840	640	64	16	120	31.5
VESA-480-75Hz	75	–	500	480	3	1	16	
720x400	31.469	–	900	720	108	18	54	28.322
VGA-400-TEXT	70.087	+	449	400	2	12	35	
832x624 APPLE	49.725	–	1152	832	64	32	224	57.2832
MAC-800	74.55	–	667	624	3	1	39	
800x600	35.156	+	1024	800	72	24	128	36
SVGA	56.25	+	625	600	2	1	22	
800x600	37.879	+	1056	800	128	40	88	40
VESA-600-60Hz	60.317	+	628	600	4	1	23	
800x600	48.077	+	1040	800	120	56	64	50
VESA-600-72Hz	72.188	+	666	600	6	37	23	
800x600	46.875	+	1056	800	80	16	160	49.5
VESA-600-75Hz	75	+	625	600	3	1	21	
1024x768	48.363	–	1344	1024	136	24	160	65
XGA	60.004	–	806	768	6	3	29	
1024x768	53.964	+	1328	1024	176	16	112	71.664
COMPAQ-XGA	66.132	+	816	768	4	8	36	
1024x768	56.476	–	1328	1024	136	24	144	75
VESA-768-70Hz	70.069	–	806	768	6	3	29	
1024x768	60.023	+	1312	1024	96	16	176	78.75
VESA-768-75Hz	75.029	+	800	768	3	1	28	
1024x768	60.24	–	1328	1024	96	32	176	80
APPLE MAC-768	75.02	–	803	768	3	3	29	
1152x864	54.054	+	1480	1152	96	40	192	80
(60Hz)	59.270	+	912	864	3	13	32	
1152x864	63.851	+	1480	1152	96	32	200	94.499
(70Hz)	70.012	+	912	864	3	1	44	
1152x864	67.50	+	1600	1152	128	64	256	108.00
(75Hz)	75.00	+	900	864	2	2	32	

1280x960	60.00	+	1800	1280	112	96	312	108.00
(60Hz)	60.00	+	1000	960	3	1	36	
1280x960	70.00	+	1800	1280	112	96	312	126.00
(70Hz)	70.00	+	1000	960	3	1	36	
1280x960	75.00	+	1800	1280	112	96	312	135.00
(75Hz)	75.00	+	1000	960	3	1	36	
1280x1024VESA-1024-60Hz	64	+	1688	1280	112	48	248	108
	60	+	1066	1024	3	1	38	
1280x1024VESA-1024-75Hz	80	+	1688	1280	144	16	248	135
	75	+	1066	1024	3	1	38	

Note: Modes 640x350, 640x400 and 720x400 is centered in the middle of the display and cannot be expanded to full screen.

Troubleshooting

This LCD Monitor has pre-adjusted using factory standard VGA timings. Due to the output timing differences among various VGA cards in the market, users may initially experience an unstable or unclear display whenever a new display mode or new VGA card is selected.

Attention

This LCD Monitor Supports Multiple VGA Modes.

Refer to the Standard Timing Table for a listing of modes supported by this LCD Monitor.

PROBLEM Picture is unclear and unstable

The picture is unclear and unstable, please perform the following steps:

1. Enter PC to "Shut Down Windows" status while you're in MS-Windows environment, except Windows XP. In Windows XP open the specific application where the problems appear.
2. Check the screen to see if there's any black vertical stripes appear. If there are, take advantage of the "Clock" function in OSD menu and adjust (by increment or decrement numbers) until those bars disappear.
3. Move to "Phase" function in OSD menu again and adjust the monitor screen to its most clear display.
4. Click "No" on "Shut Down Windows" and back to the normal PC operating environment.

PROBLEM There is no picture on LCD Monitor

If there's no picture on the LCD Monitor, please perform the following steps:

1. Make sure the power indicator on the LCD Monitor is ON, all connections are secured and the system is running on the correct timing. Refer to Chapter 3 for information on timing.
2. Turn off the LCD Monitor and then turn it back on again. If there is still no picture, press the Adjustment Control button several times.
3. If step 2 doesn't work, connect your PC system to another external CRT. If your PC system Functions properly with a CRT Monitor but it does not function with the LCD Monitor, the output timing of the VGA card may be out of the LCD's synchronous range. Please change to an alternative mode listed in the Standard Timing Table or replace the VGA card, and then repeat steps 1 and 2.

PROBLEM There is no picture on LCD Monitor

If you have chosen an output timing that is outside of the LCD Monitor's synchronous range (Horizontal: 30 ~ 80 kHz and Vertical: 56 ~ 75 Hz), the OSD will display an "Out of Range" message. Choose a mode that is supported by your LCD Monitor.

Also, if the signal cable is not connected to LCD monitor at all or properly, the monitor screen will display a message "No Input Signal".

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Planar Systems, Inc.

Customer Service
24x7 Online Technical Support: http://www.planar.com/support
1195 NW Compton Drive
Beaverton, OR 97006-1992
Tel: 1-866-PLANAR1 (866-752-6271), or +1 503-748-5799 outside the United States,
Hours: 24 hours a day, 7 days a week

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